

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

RECEIVED

MAR 20 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of

Allocation of Spectrum Below 5 GHz
Transferred from Federal Government Use

ET Docket No. 94-32

DOCKET FILE COPY ORIGINAL

To: The Commission

**COMMENTS OF COMPAQ COMPUTER CORPORATION
IN RESPONSE TO SECOND NOTICE OF PROPOSED RULEMAKING**

In the First Report^{1/} in this docket, the Commission has commendably, and for reasons which are unimpeachable, allocated the spectrum at 2390-2400 MHz for Data-PCS. The decision further holds, also correctly, that there is no need to discuss the service rules for Data-PCS at 2390-2400 MHz as such, because those rules are already in place. Second Notice at ¶ 17. The current phase of this proceeding thus deals with matters relating to the actual implementation of Data-PCS service. In these comments, Compaq Computer Corporation ("Compaq") addresses what we believe to be the two principal implementation questions on which the Commission has sought input.

First, we show that there is no need to establish formal procedures for coordination of amateur and Data-PCS uses of the band at 2390-2400 MHz. Practical

^{1/} First Report and Second Notice of Proposed Rulemaking in ET Docket No. 94-32, FCC 95-47
(rel. Feb. 17, 1995) (referred to respectively as "First Report" and "Second Notice").

No. of Copies rec'd
List A B C D E

029

and economic considerations support the Commission's tentative conclusion on this point. Second, we show that the 2390-2400 MHz and adjacent 2400 MHz ISM band must be operated separately and that the Commission's proposal to make "some allowance" in order to accommodate operations that combine use of these bands is premature at best.

In support, the following is stated:

**Coordination of Amateur Service
and Data-PCS is Unnecessary.**

The First Report (and the record upon which it is based) establishes that there is no need for "formal standards" with regard to the shared use of 2390-2400 MHz by Data-PCS and Amateur Service. Second Notice at ¶ 57. In reaching its decision to allocate 2390-2400 to Data-PCS, the Commission pointed out that its "past experience" shows that the operation of Part 15 devices (of which Data-PCS is a subset) and Amateur Services in a shared spectrum environment has not required frequency coordination or other cumbersome and costly mechanisms to accommodate shared use of the same bandwidth. First Report at ¶ 17. This conclusion is supported by intensely practical and economic considerations that apply particularly to the shared use of 2390-2400 MHz.

Neither Amateur Service use of 2390-2400 MHz nor Data-PCS use of that band is continuous throughout the day or even large parts of the day. Rather, in both cases, use of the frequencies occurs episodically and, in the case of Data-PCS, involves the transmission and receipt of information in short bursts. Thus, the very nature of the services sharing the spectrum makes conflicting use unlikely. Moreover, Amateur use of this spectrum is, at least at present, relatively light and largely confined to rural and

remote areas, in which Data-PCS use is likely to be infrequent and limited. It is true that the Commission has, permitted future Amateur Service users to be licensed in this band under the existing service rules for that use. However, the power and emission limitations applicable to Data-PCS assure that, even if the number of Amateur facilities substantially increase over time, Data-PCS will not interfere with the important public safety uses that are made of the spectrum. Thus, as a practical matter, conflicting use could arise, if at all, only in cases where a Data-PCS device is being operated in extremely close proximity to the Amateur Service facility and both are operating at the same time; and the conflict would only affect the Data-PCS device, which is portable. These conditions, if they arise at all, are certain to be exceptional. They do not necessitate the establishment of cumbersome, formal standards for coordination.

Similar considerations compel the conclusion that no restrictions need be imposed upon particular uses of 2390-2400 MHz by either the Amateur Service or Data-PCS users. The imposition of restrictions on use is simply a variant form of frequency coordination; and, the improbability of conflicting use between shared users in this band renders the need for any form of frequency coordination unnecessary. In any case, the nomadic nature of Data-PCS service would make enforcement of restrictions on use of these devices extremely difficult. Similarly, short of restricting future growth of Amateur Service in the 2390-2400 MHz band, which the Commission has declined to do,^{2/} there is no practical or fair way of limiting Amateur use of the band.

^{2/} First Report and Order at ¶ 17.

The conclusion that there is no need for any form of frequency coordination of the shared use of 2390-2400 is reinforced by economic considerations. Frequency coordination, in whatever form, carries a cost. As we and others have pointed out in this and closely related proceedings, market considerations and public interest values dictate that Data-PCS devices be available to the public at readily affordable prices. Indeed, the Commission's decision to allocate 2390-2400 for Data-PCS was, at least in part, based upon its recognition that this spectrum was well suited to immediate implementation of service without costly spread spectrum technologies and without elaborate (and costly) frequency clearing processes. See First Report and Order at ¶ 16. The imposition of formal standards for frequency coordination or the attempt to restrict particular uses would serve to increase the cost of Data PCS devices and would also impose cost burdens on Amateur Service users. There is no reason to take this step. Incidents of conflicting or incompatible use are likely to be extremely rare, can be resolved at the operational level by practical measures taken by users themselves and, in the improbable event that significant problems do arise, can be resolved in the private sector through cooperative industry undertakings.

**It is Imperative That the 2390-2400 MHz and Adjacent
2400 MHz ISM Bands Be Operated Separately.
The Commission's Proposal to Allow Operations
that Combine Use of Both Bands is Premature at Best.**

The Second Notice points out, correctly, that the existing service rules "effectively preclude" operations that would combine 2390-2400 MHz with the adjacent 2400-2483.5 MHz band for use as a "single, large Part 15 band" and asks whether "some

allowance" should be made to accommodate operations "that combine use of these bands." Second Notice at ¶ 17.

The core difficulty with this Proposal is that it is ambiguous and appears more theoretic than real. Surely, the Commission does not mean, by the reference to a "single, large" Part 15 band, to allow all of the devices authorized to operate above 2400 MHz--including a large number of devices that have no communications capability (such as microwave ovens)--to operate at 2390-2400 MHz. That would effectively preclude any use of 2390-2400 by Data-PCS devices and thus would be utterly inconsistent with the conclusions reached in the First Report. It seems, therefore, that the Second Notice has reference to certain limited and specialized applications of Part 15 devices that might operate in both bands. The Second Notice does not, however, identify a particular application that would involve "combined use"; and none has been advanced in the earlier stages of this proceeding. In these circumstances, prudence dictates that the Commission refrain from making any changes to applicable service rules and defer the question of combined operations in both bands unless and until a specific proposal for that type of operation has been advanced and can be evaluated.

The reasons for a cautious approach to this question are compelling. Throughout the several proceedings involving Data-PCS, the Commission has recognized that the benefits of Data-PCS will not be realized unless two fundamental conditions with regard to use of spectrum are satisfied. First, because Data-PCS is intended to be truly nomadic--usable, on a nationwide basis, in a broad variety of physical environments, ranging from the home to the office place--any other use of spectrum must be fundamentally compatible with Data-PCS services. Secondly, that compatibility must be

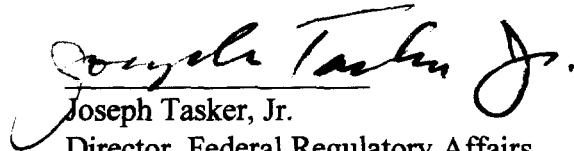
attainable without the imposition of costly spread spectrum or other spectrum searching requirements on Data-PCS devices. The First Report makes clear that 2390-2400 was allocated to Data-PCS precisely because the spectrum environment in that band satisfy those conditions. First Report at ¶ 16.

It is imperative that the current spectrum environment at 2390-2400 MHz be preserved. As it is, the NTIA's Preliminary Spectrum Allocation Report points out that the spectrum at 2390-2400 MHz is susceptible to some level of ambient noise from the nearby 2402-2417 MHz band. It is true that Data-PCS devices are robust enough to withstand this noise level. However, "combined operations" imply an indeterminate and potentially substantial increase of noise at 2390-2400 MHz or, worse still, an environment in which devices operating in one band bleed over into the other band or straddle the band edge. This cannot be permitted.

This conclusion does not foreclose the future development of devices or applications that involve some form of combined use of both bands. The fact is that the Commission's procedural rules provide "some allowance" for technological breakthrough that are otherwise inconsistent with established service rules. The Commission may, and in some circumstances must, grant waivers of its rules, including service rules, upon an appropriate showing. Until such a request is filed, there is no meaningful way to determine whether a particular combined use will satisfy the essential conditions that must exist to assure the continued utility of 2390-2400, MHz for Data-PCS and whether the proposed departure from existing service rules would serve the public interest. Until

such time as such a request is filed, the Commission's proposal to allow combined operation is premature at best.

Respectfully submitted,

A handwritten signature in cursive script, reading "Joseph Tasker, Jr.", written in dark ink.

Joseph Tasker, Jr.
Director, Federal Regulatory Affairs
Compaq Computer Corporation
1300 I Street, N.W., 490 East
Washington, DC 20005

Of Counsel:

Ian D. Volner, Esq.
William Coston, Esq.
Venable, Baetjer, Howard & Civiletti, L.L.P.
1201 New York Avenue, N.W., Suite 1000
Washington, DC 20005

March 20, 1995